

# **Patterns in Fire**

## **The Recorded History of Fire in Everglades National Park and Big Cypress National Preserve**

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# History

- Fire in the south Florida landscape is influential in shaping the ecosystem
- Interaction of hydrology, soil formation, and fire is a critical complex component in the persistence of the biotic components of the Everglades



- Early residents and settlers used fire
- Fire regime changed with changing attitudes toward the Everglades
  - draining
  - clearing

# Records

- Data from Everglades National Park and Big Cypress National Preserve fire programs
- Originally recorded using DI-1202 form
  - Many variations on the form
  - Filled out by many people → some conflicting entries
  - Perimeters were
    - hand drawn on the form
    - hand drawn on topo maps
    - hand drawn on mylar
    - delineated using GPS
    - GIS format
- Information gleaned from the form
  - and associated fire narratives or from online reporting formats
- All information compiled into a geodatabase
  - Updated annually

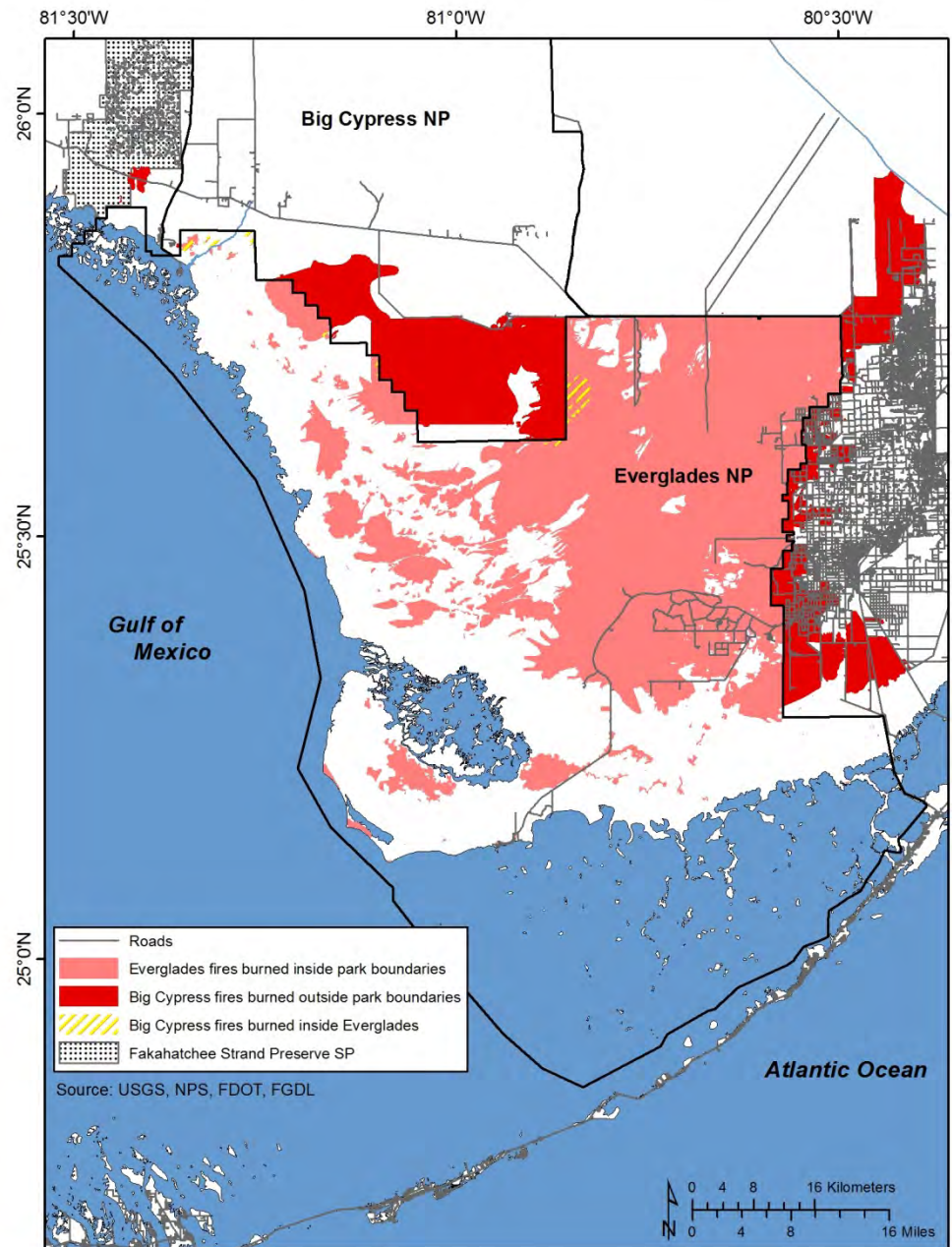


# Everglades National Park

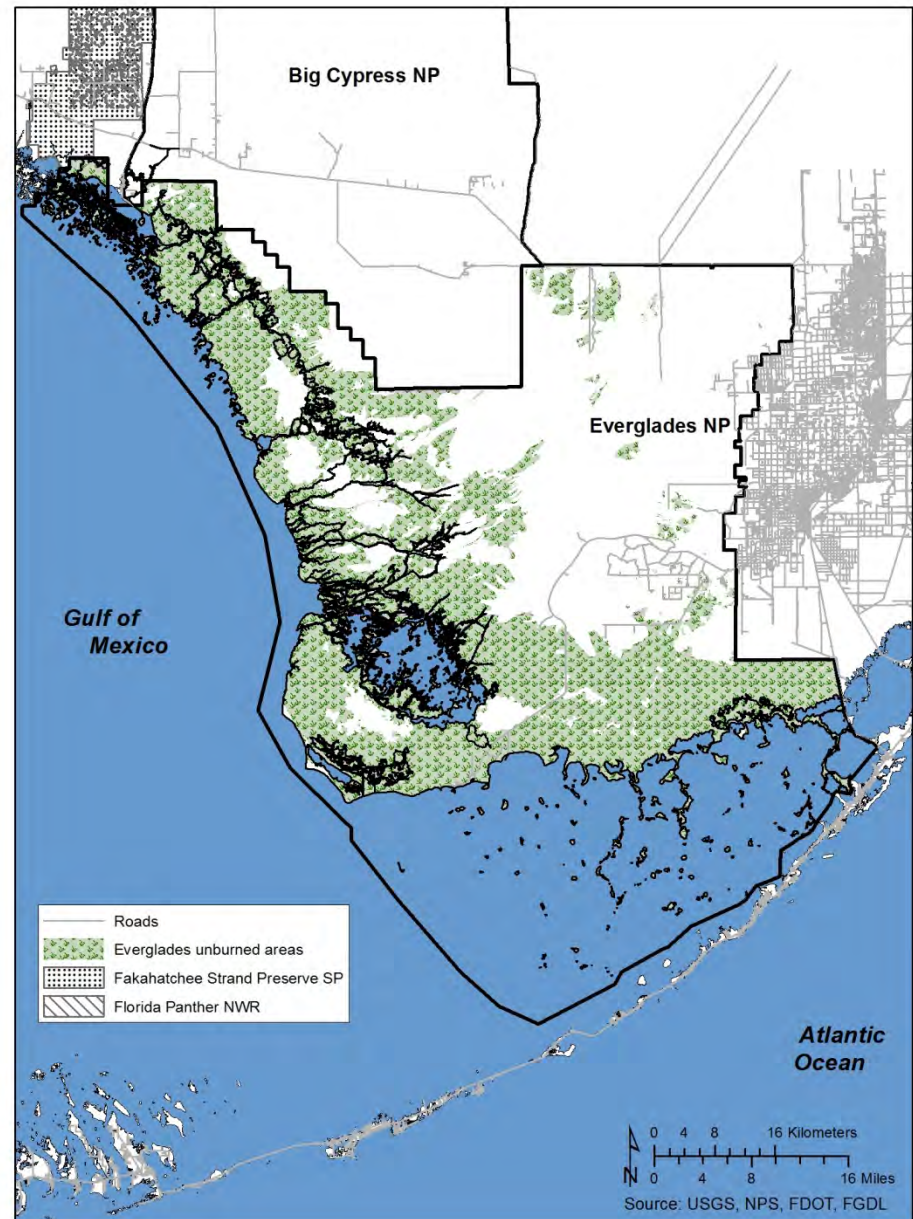
- established in 1947
- fire program began in 1948
- at the forefront of NPS fire policy development
  - one of the first to develop a fire management plan
- the first to allow prescribed burns
- first prescribed burn noted in park fire records was in 1969
  - Robertson did a study of the effects of fire on the pinelands of Long Pine Key in the late 1950's



# Area burned



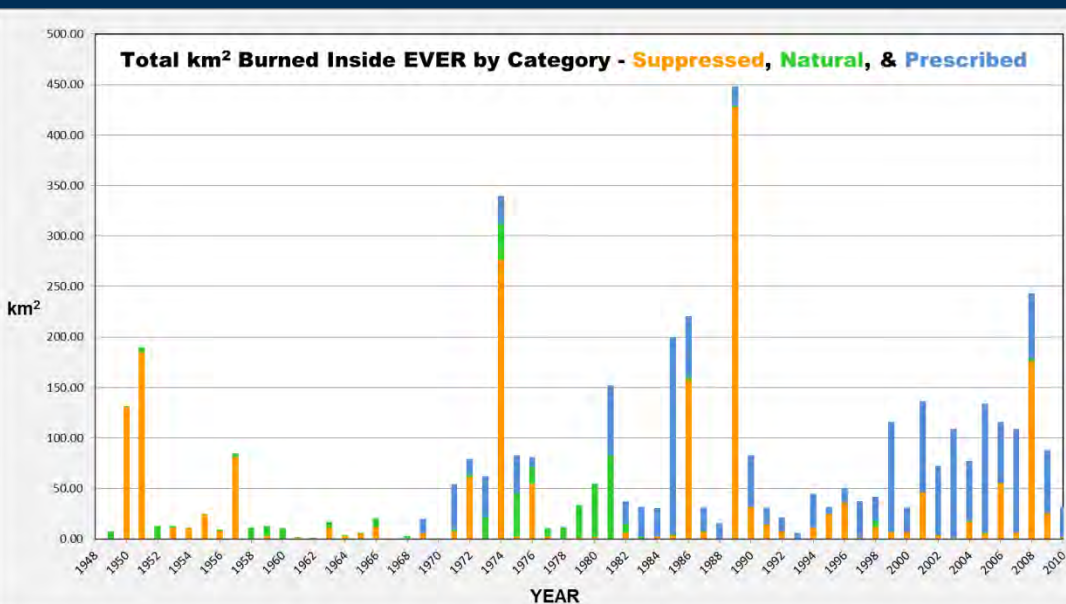
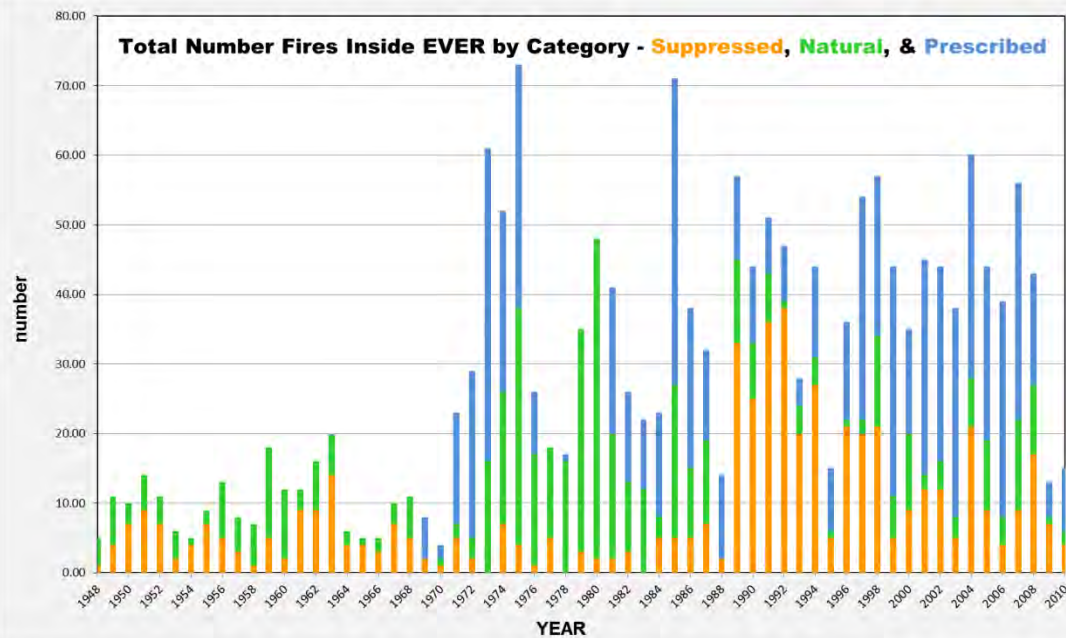
# Area unburned since 1948



# Everglades NP

	#	year
min	4	1970
max	73	1975

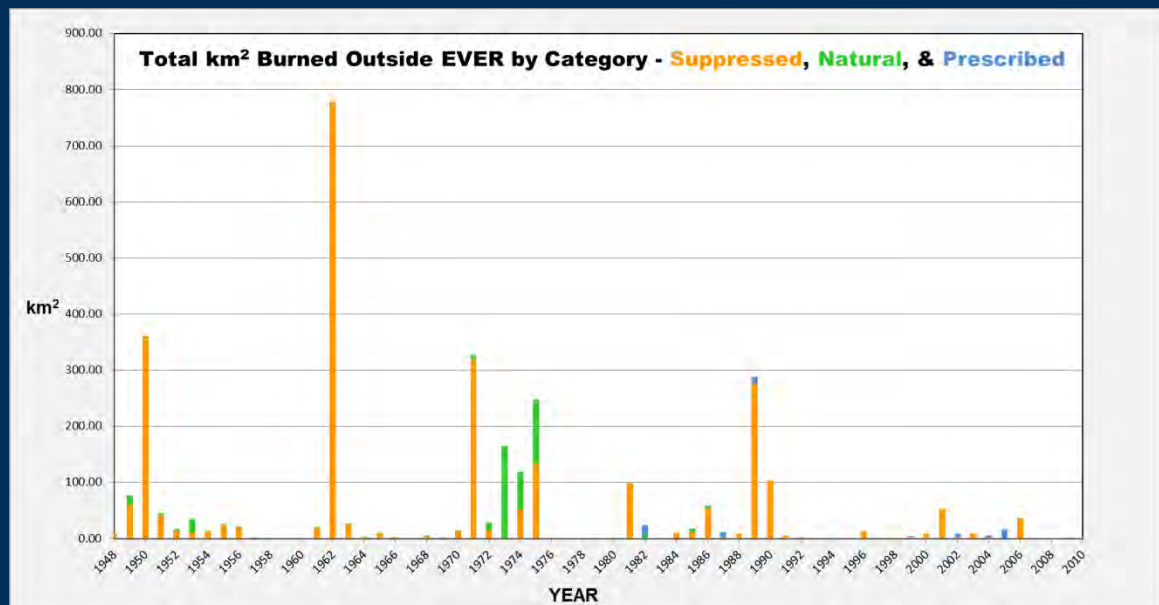
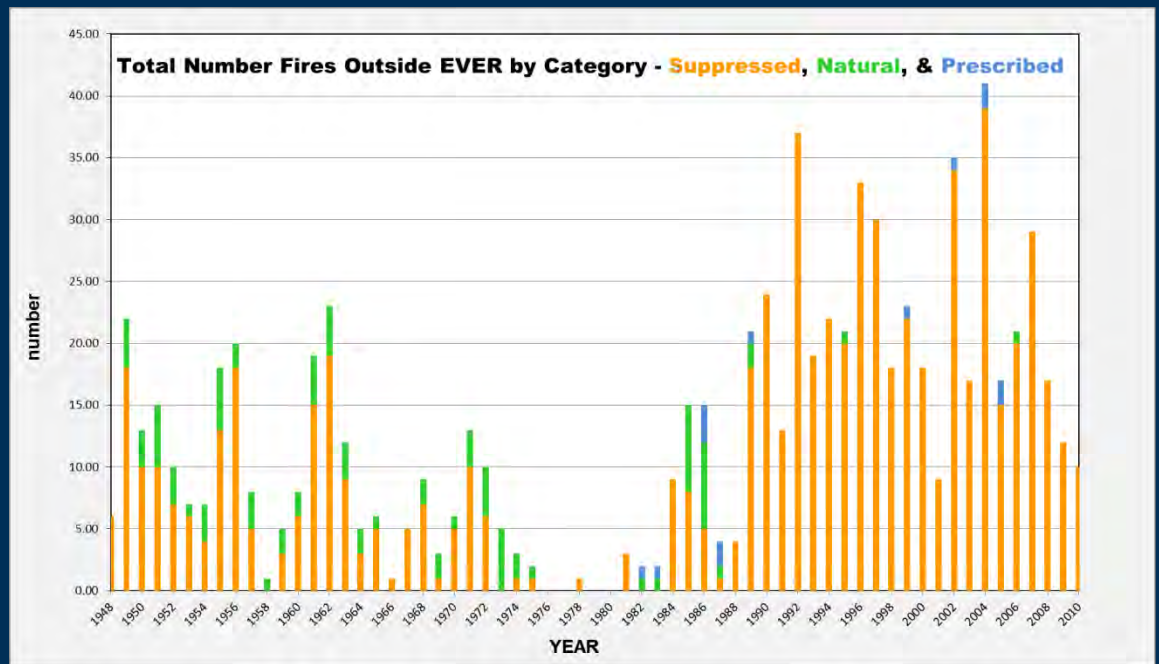
	Date	sq km
Natural	June 2000	0.0004
Natural	July 1981	77.05
Prescribed	July 1999	0.0004
Prescribed	May 1985	91.53
Suppressed	Jan 1997	0.0004
Suppressed	May 1989	399.83



# Everglades NP

	#	year
min	0	1976-77-79-80
max	41	2004

	Date	sq km
Natural	Feb 1985	0.0004
Natural	May 1973	141.64
Prescribed	May 1987	0.0008
Prescribed	Feb 1982	16.88
Suppressed	Jan 1956	0.0004
Suppressed	May 1962	746.82



Ever 1948 - 2010

dry season

Nov

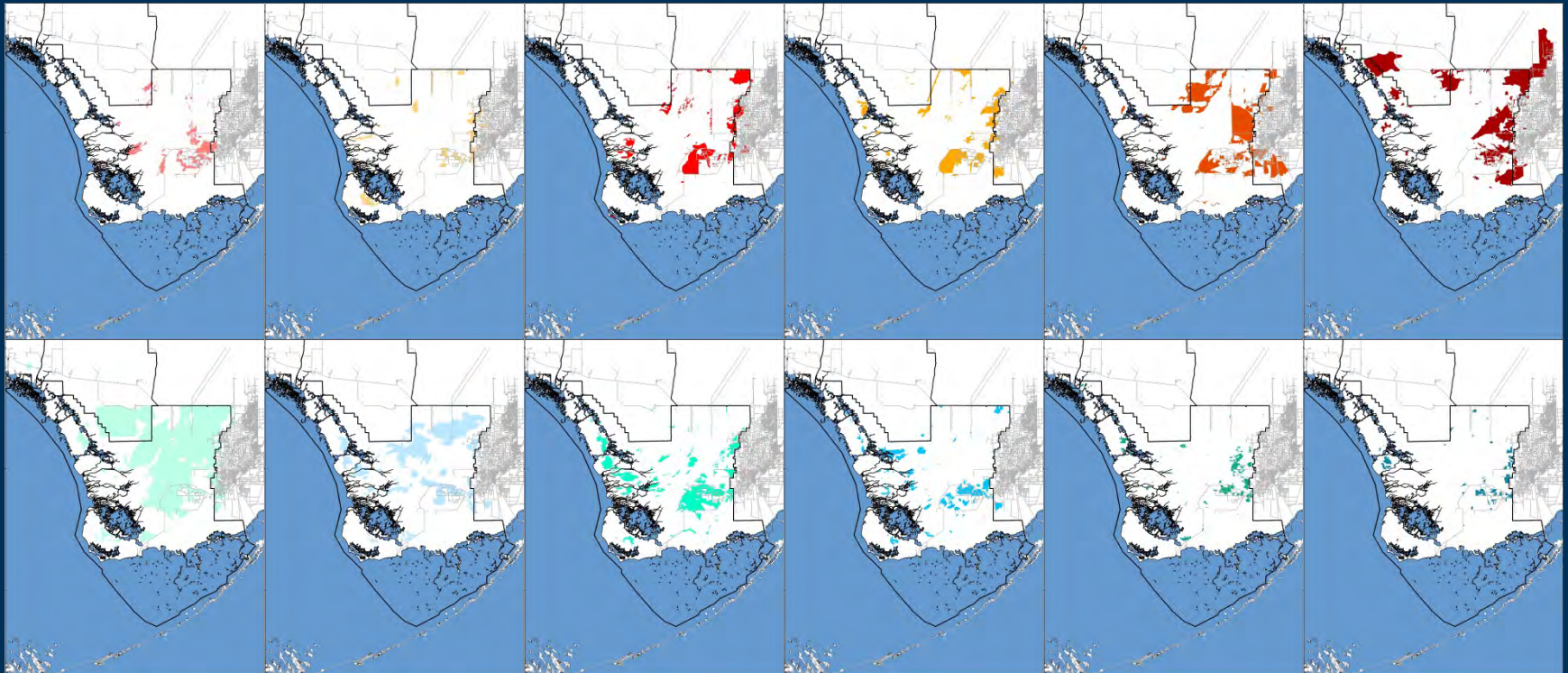
Dec

Jan

Feb

Mar

Apr



May

Jun

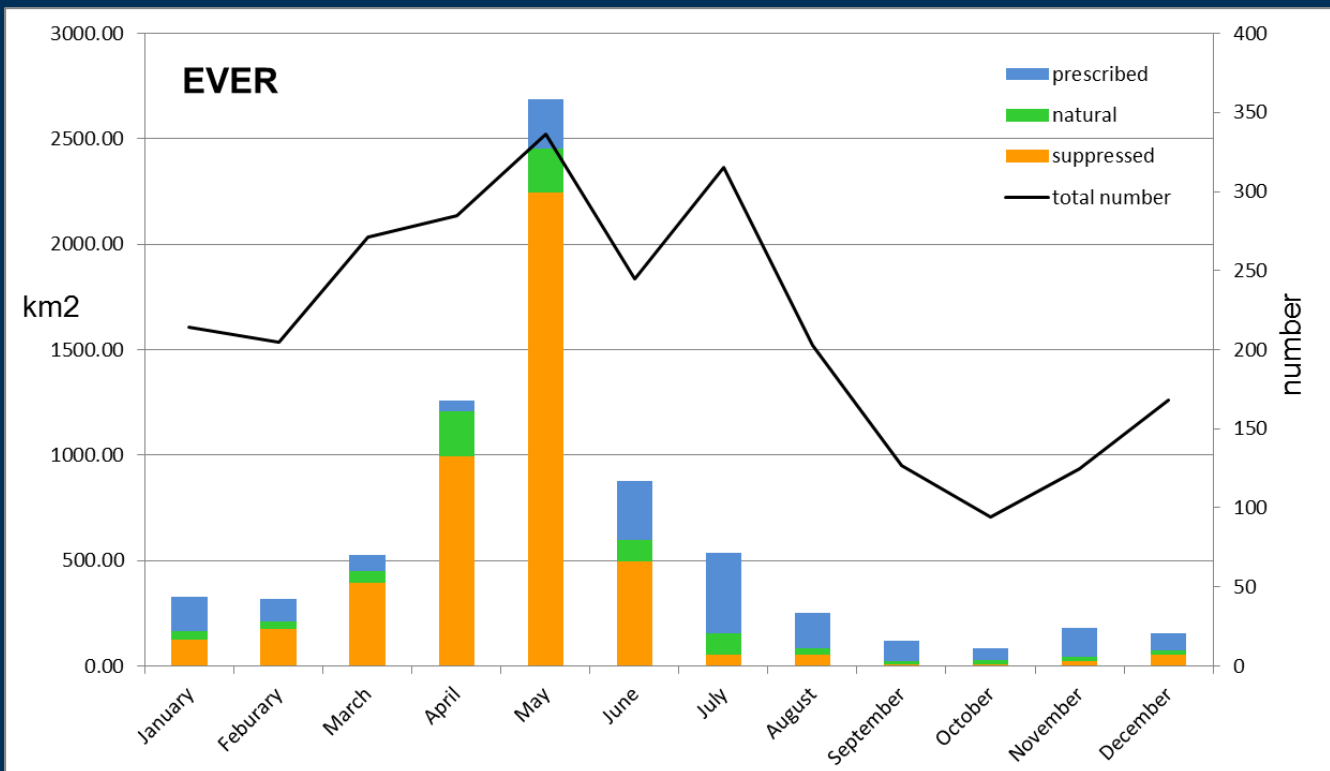
Jul

Aug

Sep

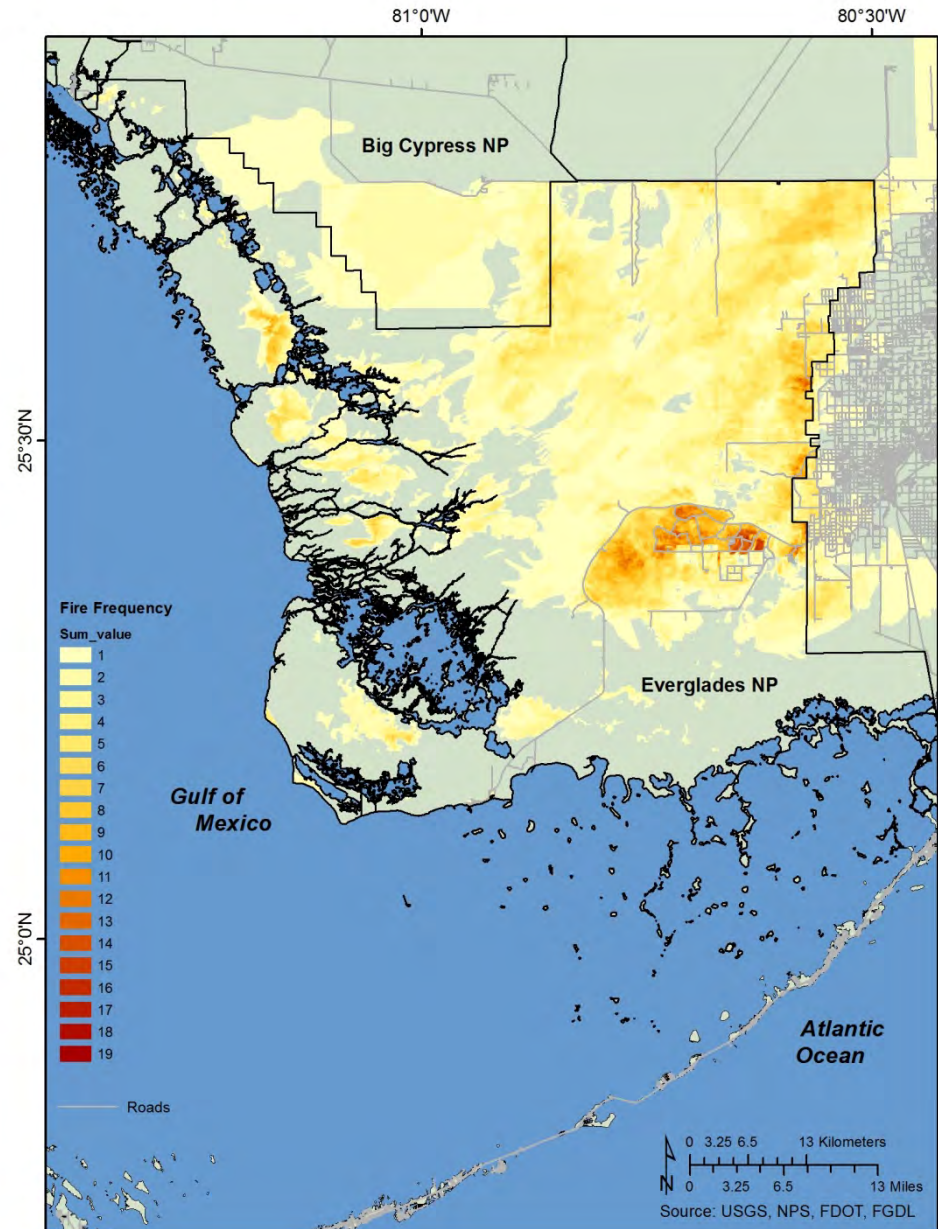
Oct

wet season



	% fires suppressed	% fires natural	% fires prescribed
January	66.8	14.5	18.7
February	69.3	12.7	18.0
March	69.4	14.8	15.9
April	71.2	14.7	14.0
May	58.3	17.6	24.1
June	27.3	34.3	38.4
July	20.3	30.8	48.9
August	20.7	40.4	38.9
September	15.7	43.3	40.9
October	24.5	28.7	46.8
November	43.2	19.2	37.6
December	54.8	21.4	23.8
All Months	47.7	23.3	29.0

# Frequency burned

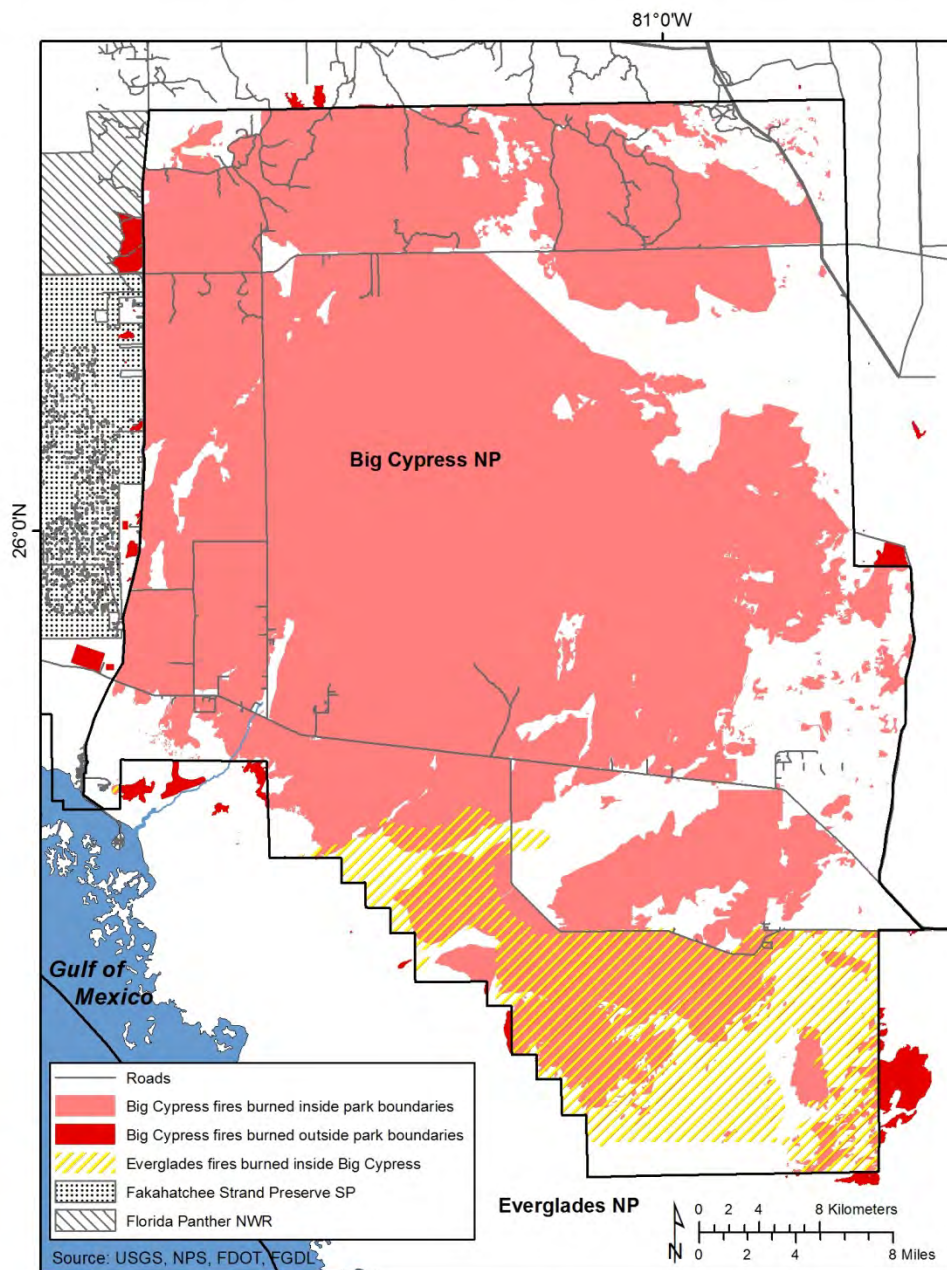


# Big Cypress National Preserve

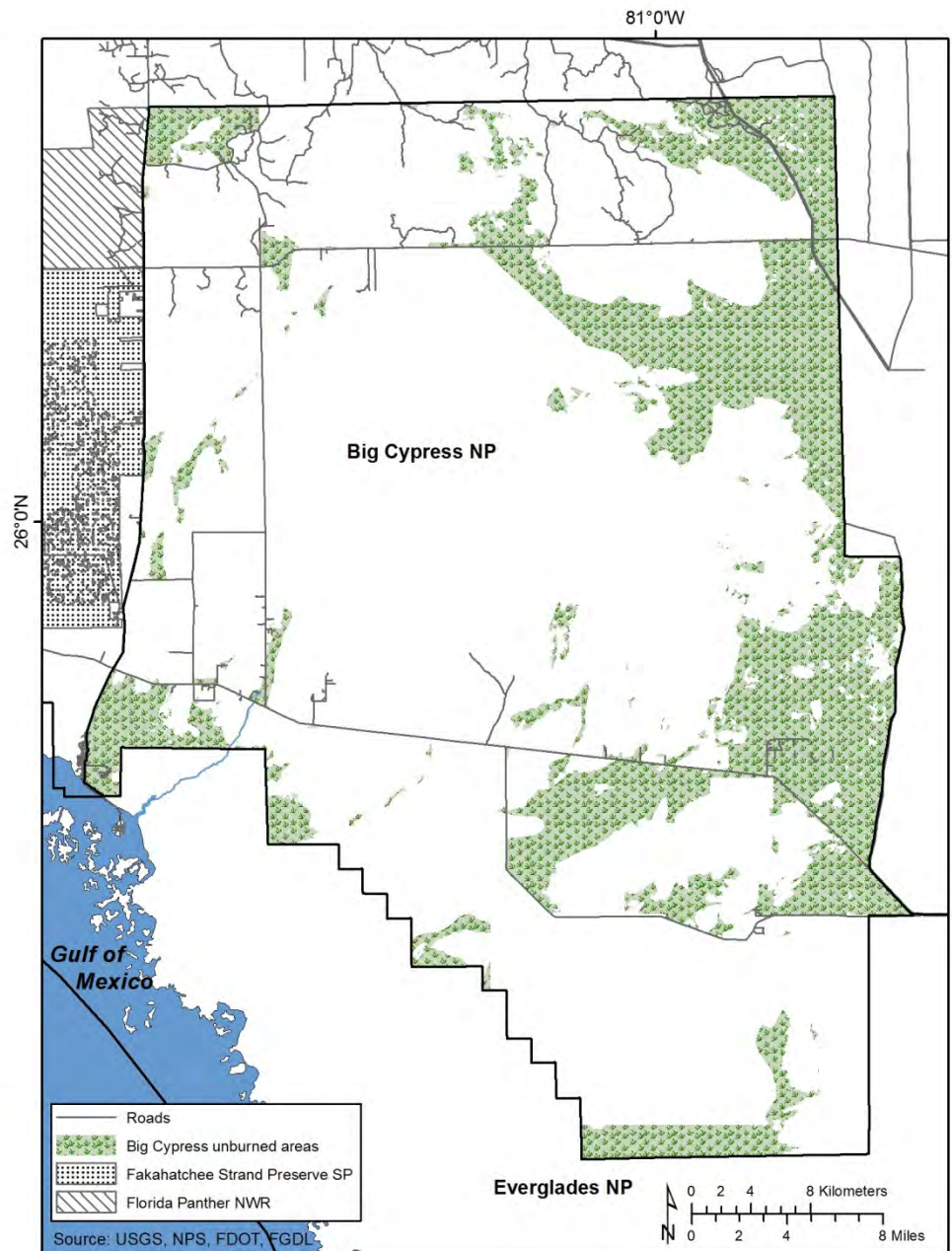
- established in 1974
- fire program began in 1978
- first prescribed burn noted in preserve fire records was in 1978



# Area burned



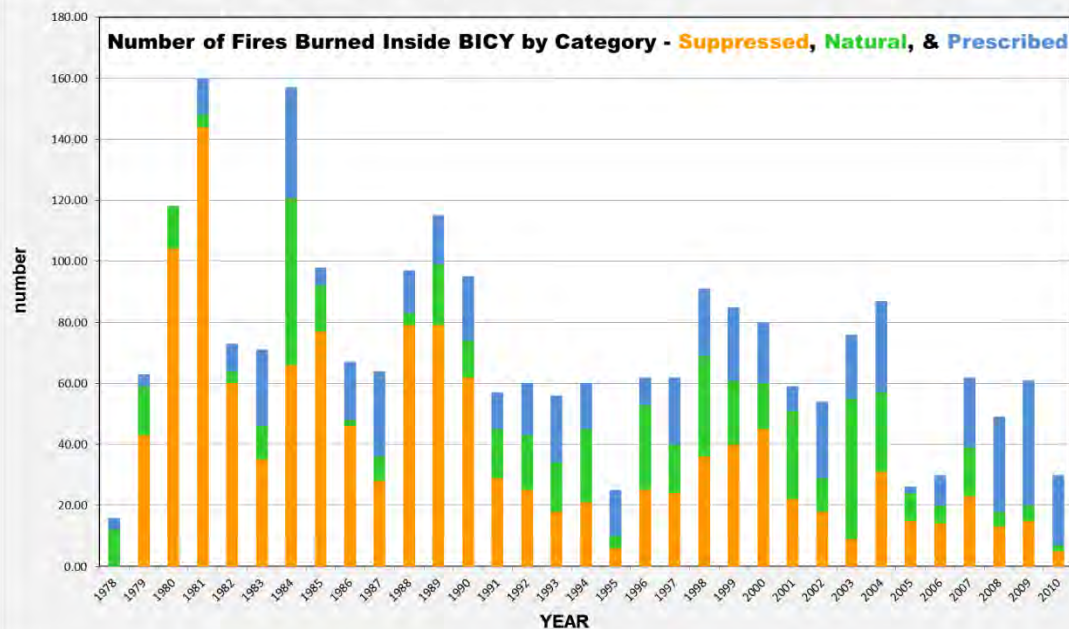
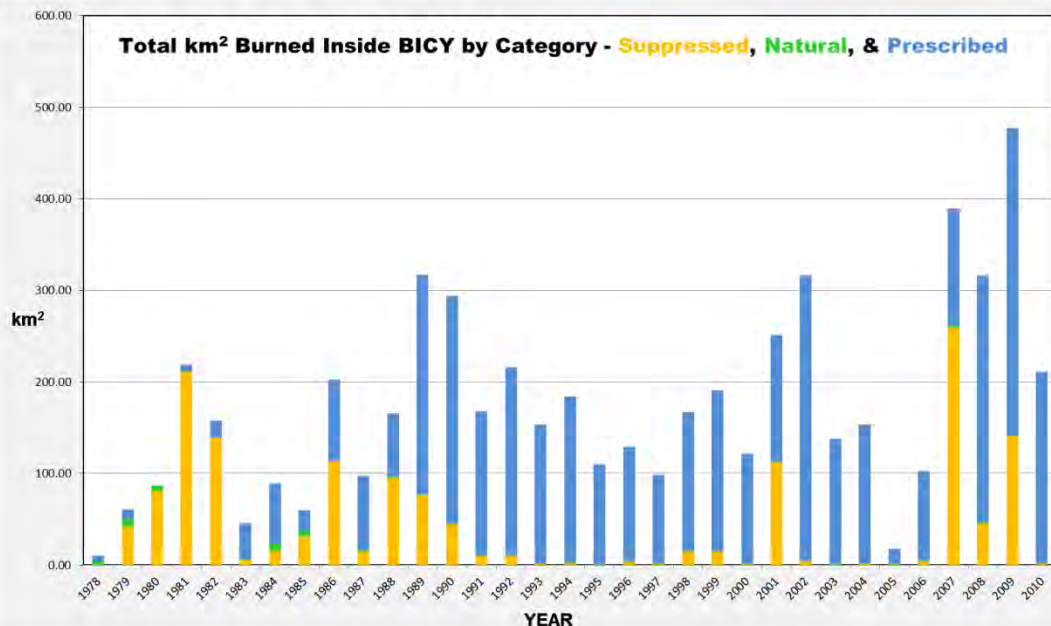
# Area unburned since 1978



# Big Cypress NP

	#	year
min	16	1978
max	160	1981

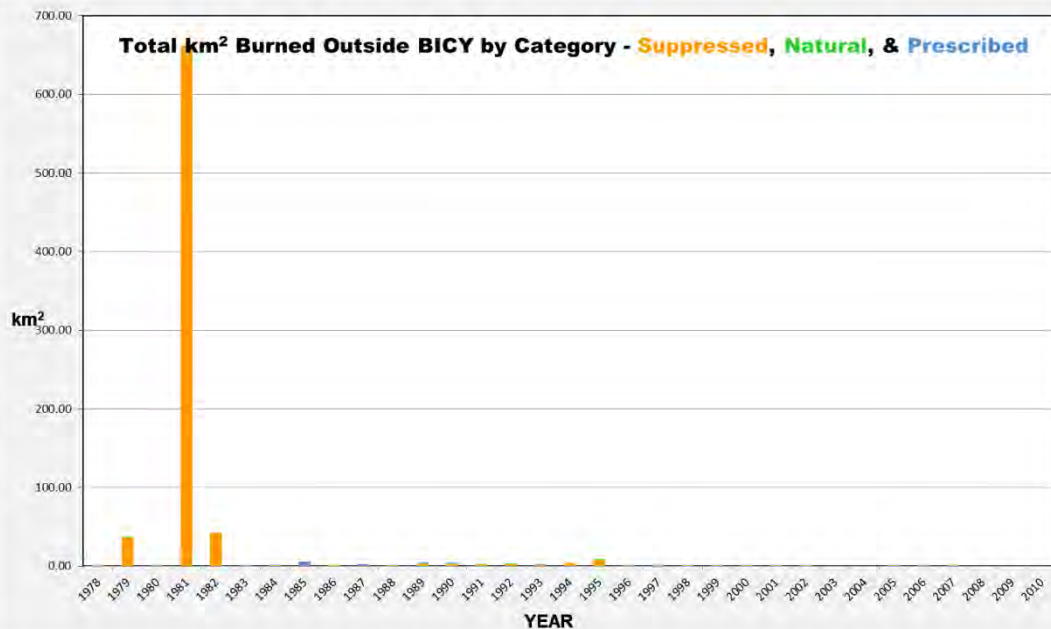
	Date	sq km
Natural	Mar 1989	0.0004
Natural	Jan 1985	4.23
Prescribed	Dec 1981	0.0004
Prescribed	Nov 1989	81.72
Suppressed	May 1985	0.0004
Suppressed	May 2007	146.98



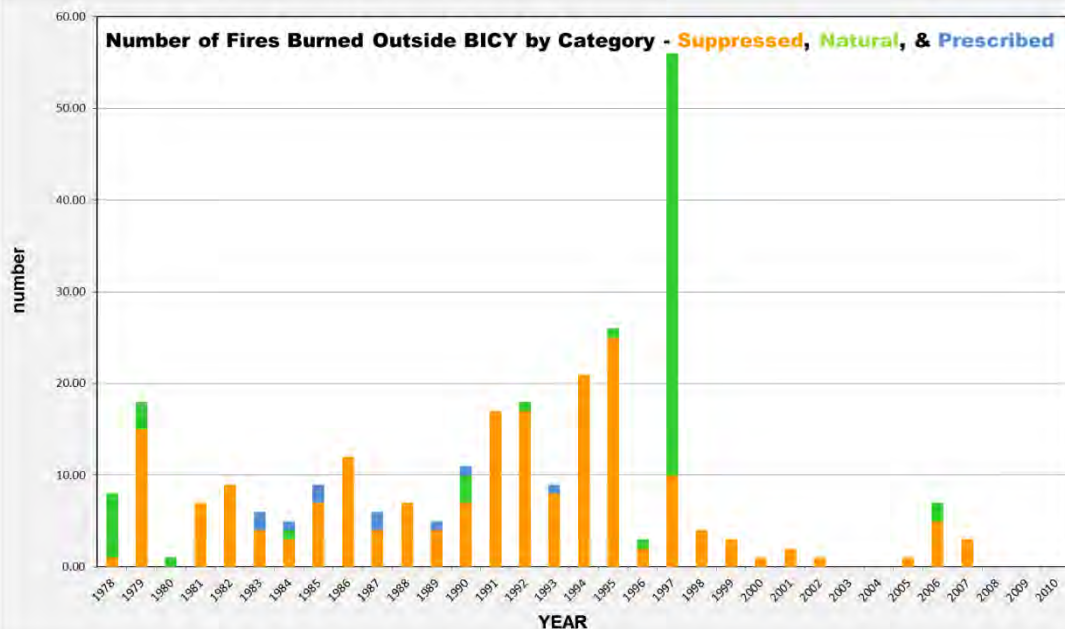
number

# Big Cypress NP

	#	year
min	0	2003-04-08-09-10
max	56	1997



	Date	sq km
Natural	Feb 2006	0.0004
Natural	Nov 1978	0.81
Prescribed	Dec 1983	0.0004
Prescribed	Jan 1985	3.57
Suppressed	Mar 1991	0.0004
Suppressed	May 1981	660.77



dry season

Nov

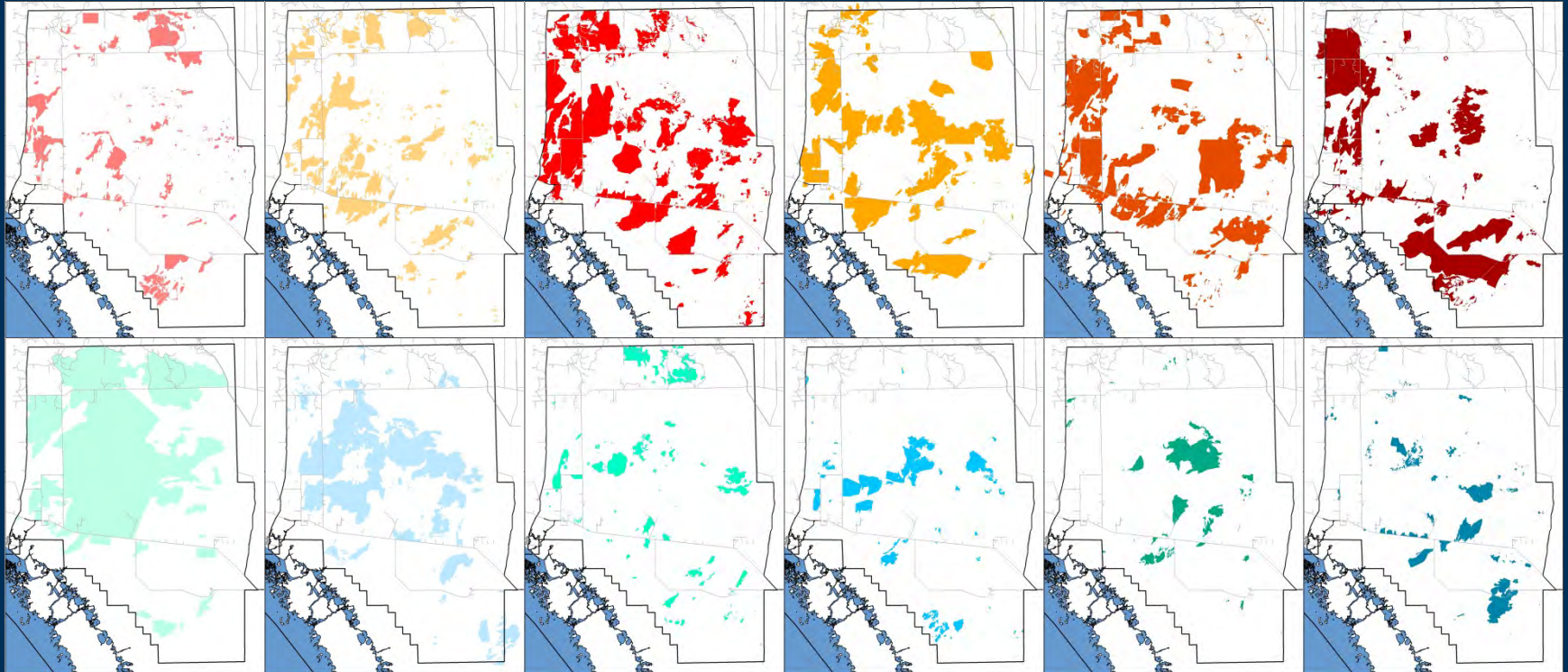
Dec

Jan

Feb

Mar

Apr



May

Jun

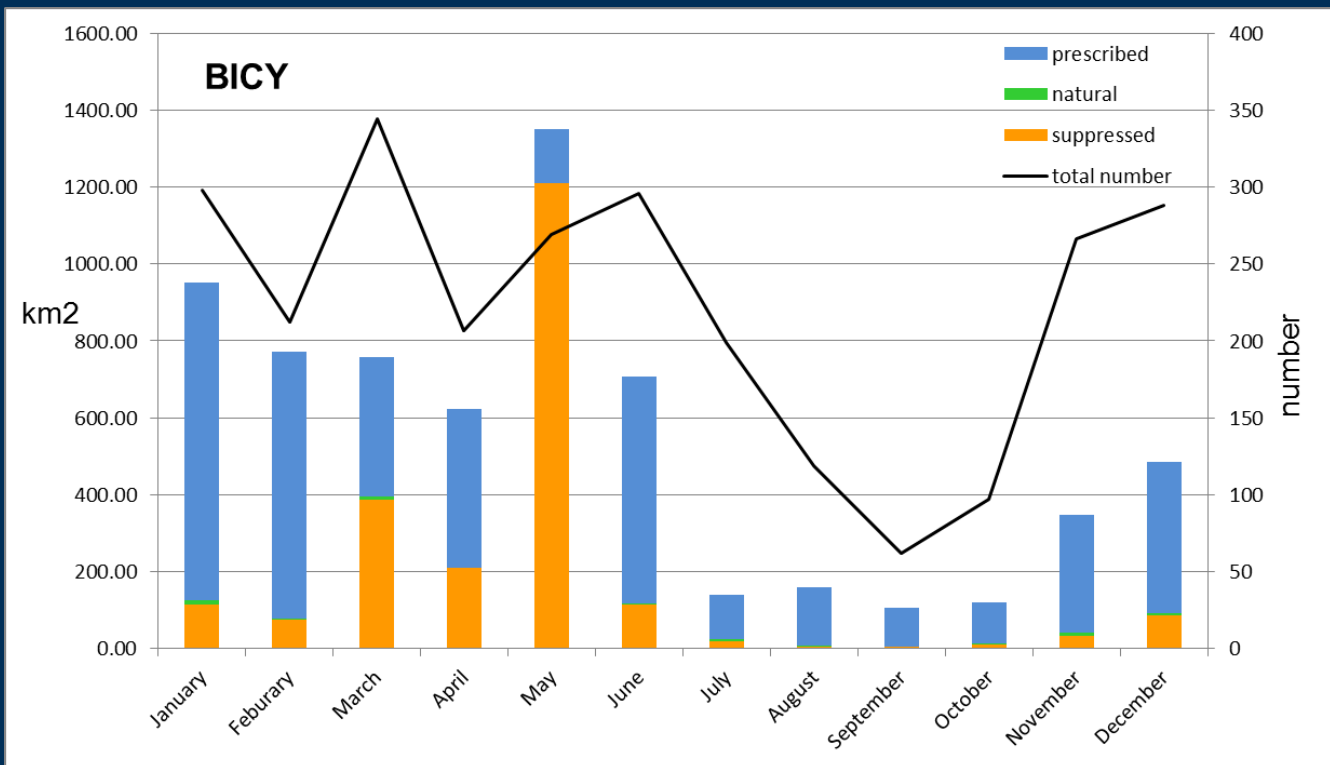
Jul

Aug

Sep

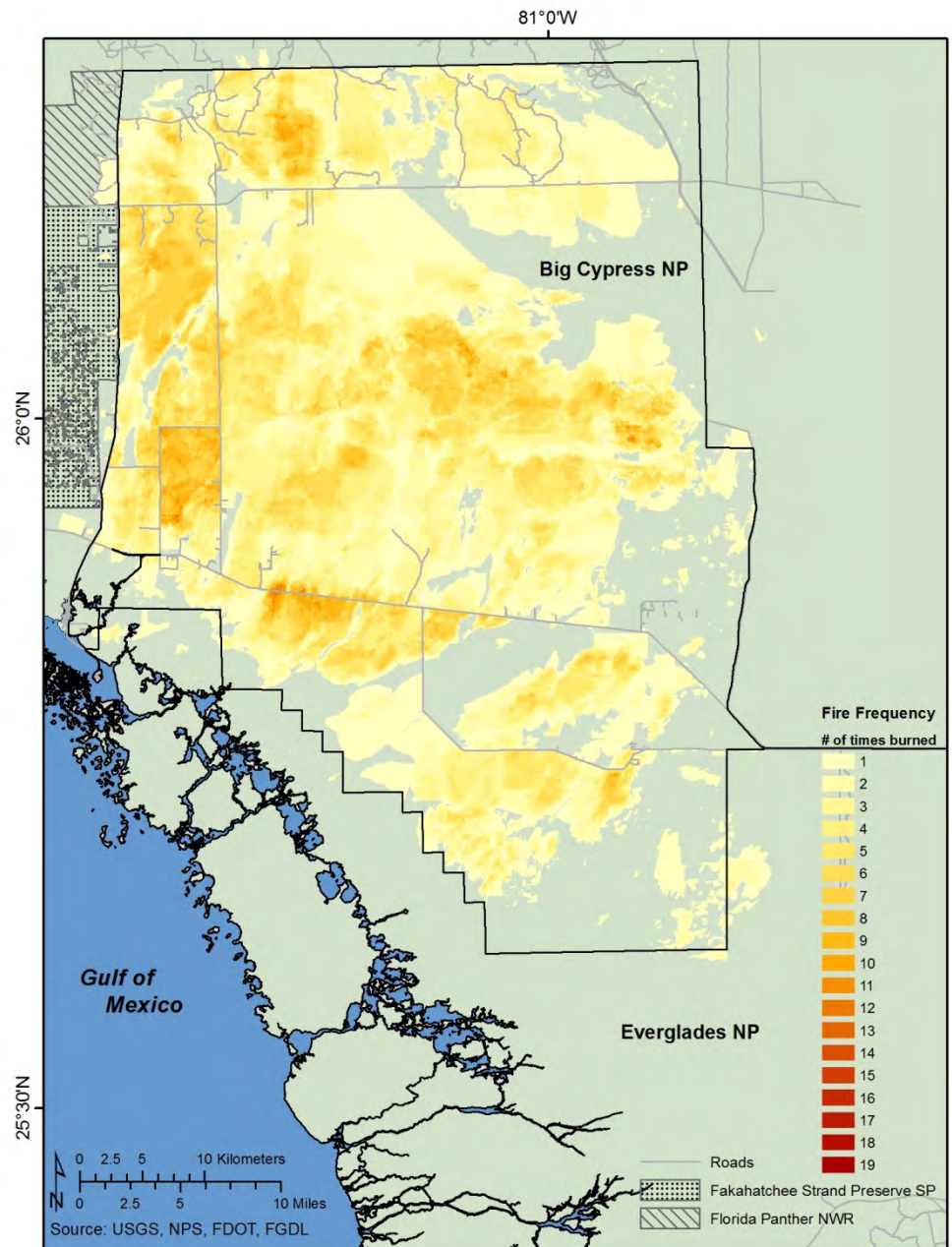
Oct

wet season



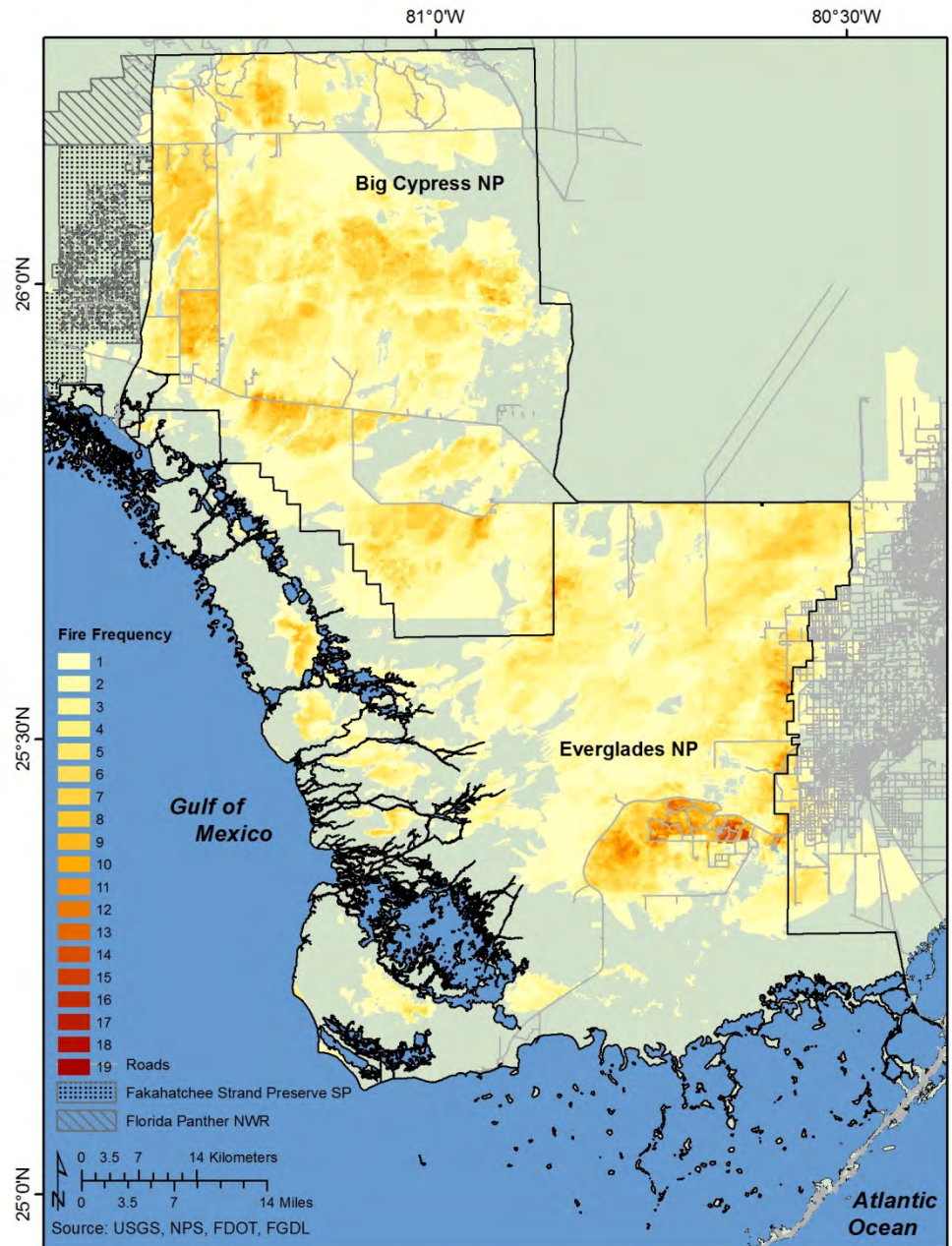
	% fires suppressed	% fires natural	% fires prescribed
January	48.3	11.4	40.3
Feburary	44.3	11.8	43.9
March	66.6	18.9	14.5
April	72.0	8.2	19.8
May	74.3	13.0	12.6
June	49.7	34.5	15.9
July	41.7	43.2	15.1
August	25.2	52.1	22.7
September	27.4	40.3	32.3
October	47.4	32.0	20.6
November	53.0	28.2	18.8
December	61.5	11.8	26.7
All Months	54.8	22.2	22.9

# Frequency burned



Frequency  
burned

Bicy & Ever  
combined



# Acknowledgements

**R. Best: USGS, Greater Everglades PES**

**S. Howington: NPS, CESI program**

**NPS EVER Fire Cache**

**R. Anderson, M. Vaidya, B. Panko, D. Loveland, T. Holland**

**NPS BICY Fire Cache**

**M. Wright**



